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ABSTRACT

Recommendations of five reports for improving American public elementary and secondary education are listed in a format enabling comparisons to be made with respect to 11 major categories and numerous subcategories. Included are recommendations of the reports from the National Commission on Excellence in Education, the Twentieth Century Fund, the Education Commission of the States, the National Science Board, and the Carnegie Foundation for the Advancement of Teaching. The 12 major categories include curriculum; programs for special populations, college entrance requirements, performance standards for students, teachers, leadership and management, fiscal support, federal role, implementation plan, business/education partnerships, and sponsorship and membership of the groups producing the reports. (RH)

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COMPARISON OF RECOMMENDATIONS FROM SELECTED EDUCATION REFORM REPORTS

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COMPARISON OF RECOMMENDATIONS FROM SELECTED EDUCATION REFORM REPORTS

Recommendations for improving American public elementary and secondary education have received much attention since the release of the report from the Secretary of Education's National Commission on Excellence in Education. Additional impetus to this discussion has been added by reports from the Twentieth Century Fund, the Education Commission of the States, the National Science Board, and the Carnegie Foundation for the Advancement of Teaching.

Each report has been sponsored by a different organization and appears to have a slightly different orientation. For example, the principal audience for the Excellence Commission's report would appear to be the general public, and the recommendations are primarily for secondary schools. The report from the Twentieth Century Fund focuses more on the concerns about education in urban areas, and the recommendations principally call for Federal actions. The report from the Education Commission of the States was issued by the "Task Force on Education for Economic Growth." The recommendations have a broader focus and are addressed jointly to businesses, labor, and the professions. The National Science Board's Commission on Precollege Mathematics and Science Education was charged with providing recommendations for improving the quality of high school mathematics and science programs. Rather than being based on new field studies or a detailed analysis of a research data base, these four reports have tended to rely upon available research data and expert testimony in arriving at their recommendations. This tendency does not characterize the study of the American high school conducted by the Carnegie Foundation for the Advancement

of Teaching. This report utilized data from the studies by James Coleman and John Goodlad referred to below. The Carnegie report's recommendations centered on high school programs, requirements, and teachers.

These five reports have been selected for comparison because of the comprehensiveness of their recommendations and the implications of the recommendations for public policy. Even though these completed reports appear to be directed toward both elementary and secondary schools, most of the recommendations relate to secondary schools. Little attention has been given to changes that may be needed in elementary schools so that they can provide the types of educational experiences needed by students if they are to succeed in the "new" high schools.

Other studies either have been completed or are underway. James Coleman's ongoing study, "High School and Beyond," focuses on educational processes and outcomes and includes a sample of 58,000 students from 1,000 public and private high schools. John Goodlad's "A Study of Schooling" is based on extensive site visits and longitudinal data from 1,000 classrooms. Theodore Sizer is completing "A Study of High Schools" for the National Association of Secondary Schools; this study involves extensive observations gained from 65 high schools. The College Entrance Examination Board's Educational EQuality Project has recently completed a study of the needed academic preparation for college in terms of what students need to know and be able to do in order to succeed in postsecondary education. Mortimer Adler also has completed work on the "Paideia Proposal" that calls for a dramatic revision of the high school curriculum with greater attention being given to academic rigor and substance.

These five reports will be followed by others over the next several months. (See CRS Issue Brief 83106 for updated information.) On the following pages, recommendations from the reports have been grouped and compared by broad topic.

COMPARISON OF RECOMMENDATIONS FROM SELECTED EDUCATION REFORM REPORTS

	The National Commission on Excellence in Education	Twentieth Century Fund Task Force	ECS* Task Force on Education for Economic Growth	National Science Board Precollege Commission	Carnegie Foundation American High School Study
CURRICULUM	Significantly more time should be devoted to learning the "new basics"--English, mathematics, science, social studies, and computer sciences, and for the college-bound a foreign language. Rigorous programs should be provided to advance students' personal, educational, and occupational goals, such as the fine and performing arts and vocational education. Elementary schools should provide a sound base in English language development and writing, computational and problem-solving skills, science, social studies, foreign language, and the arts. Foreign languages should be started in the elementary grades with 4-6 years of study	The Federal Government should clearly state that the most important objective of elementary and secondary education in the United States is the development of literacy in the English language.	The school curriculum should be strengthened. States and communities should identify skills they expect the schools to impart. The academic experience should be more intense and more productive. Courses not only in mathematics and science, but also in all disciplines, must be enlivened and improved. The goal should be both richer substance and greater motivational power--elimination of "soft" non-essential courses, more enthusiastic involvement of students in learning, encouragement of mastery of skills beyond the basics, e.g., problem-solving, analysis, interpretation, and persuasive writing. Educators, business and labor leaders, and other interested parties should clearly identify the skills that the schools are expected to impart to students for effective employment and citizenship.	Schools should return to the basics of reading, writing, and arithmetic, but also should add the "new basics" of communication and higher problem-solving skills, scientific and technological literacy, and computer literacy. Educational objectives should focus on mathematics, science, and technology for all students. New curricula should incorporate practical issues that will require the collection of data, communication of results, and formulation and testing of solutions. The goal would be to improve use and understanding of calculation and mathematical analysis, sharpen communication skills, develop problem-solving skills, impart scientific knowledge, develop a respect for science and mathematics, and stimulate interest in science, mathematics, and technical careers.	Each school should have clearly established goals that focus on the mastery of language, preparation for work and further education, and community service. In addition to English, social studies, science, and mathematics, the high school core should include foreign languages, the arts, non-western studies, technology, meaning of work, and importance of health. In the last two years of high school, students should enroll in a cluster of electives and explore career options. In elementary schools, the focus should be on communications skills. All high school students should complete a basic English course with an emphasis on writing, with enrollments limited to 20 students and no more than two such classes in the teacher's regular load. The high school core should stress the spoken word. Teachers should use a variety of teaching styles and encourage student participation.
High School Graduation Requirements	All students seeking a diploma should be required to complete (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science; (d) 3 years of social studies; and (e) one-half year of computer science.	--No comparable provision--	--No comparable provision--	High school students should complete at least (1) 3 years of mathematics, including one year of algebra; (2) 3 years of science and technology, including 1 semester of computer science. Steps should be taken to phase in requirements of four years of science and four years of mathematics.	Required courses in the student's core program should be increased from 1/2 to 2/3 of the total units for high school graduation. The core would include (a) 3 units of English; (b) 2 units of foreign language; (c) 2.5 units of history; (d) 1 unit of civics; (e) 2 units of science; (f) 2 units of mathematics, (g) 1/2 unit of technology; (h) 1/2 unit of health; (i) 1/2 unit seminar on work; and (j) 1/2 unit senior independent social issue project that draws upon their high school experiences.

* Education Commission of the States.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
High School Graduation (cont'd.)	For the college-bound, 2 years of foreign language in high school are strongly recommended.				A "new Carnegie unit" service requirement involving school or community volunteer work should be added.
Course Content	(Detailed implementing recommendations are included for each subject area.)	--No comparable provision--	(A list of "Basic Skills and Competencies for Productive Employment" is contained in the Appendix.)	Objectives are listed for mathematics, science, and technology education at both the elementary and secondary levels.	Details are provided concerning the content emphasis of the core curriculum.
Proficiency in a Second Language	For the college-bound, two years of a foreign language in high school are strongly recommended.	Every American public school student should have the opportunity to acquire proficiency in a second language.	--No comparable provision--	--No comparable provision--	Foreign languages are considered to be a vital element in the core curriculum.
Time	Significantly more time should be devoted to learning the "new basics." School districts and State legislatures should strongly consider 7-hour school days, as well as a 200- to 220-day school year. Time available for learning should be expanded through better classroom management and organization of the school day. Additional instructional time should be found to meet the needs of slow learners, the gifted, and others who need more instructional diversity than can be provided in the conventional school day and year.	--No comparable provision--	Every State should increase the duration and intensity of academic learning time. Students should be introduced earlier to such critical subjects as science. Schools should examine each school year, especially the twelfth grade, to ensure that time is not wasted. Both States and localities should consider lengthening the school year and the school day by extending teachers' contracts. Learning time should be increased by establishing a wider range of learning opportunities beyond the normal school day and year.	School districts should explore lengthening the school year as a means of raising teacher pay. School time should be filled with purposeful and substantive content, and interruptions should be minimal. In grades K-6, 60 minutes per day should be spent on mathematics, and 30 minutes on science. A full year of mathematics and of science and technology should be required in grades 7 and 8. To provide more time for the study of mathematics, science, and technology, the school day, week, and/or year must be substantially lengthened.	Class schedules should be arranged more flexibly to permit larger blocks of instructional time for certain courses. Greater use should be made of off-campus learning sites and part-time professionals. Large high schools (over 2,000 students) should be organized into smaller units, i.e., schools within a school.
Textbooks and Instructional Materials	Textbooks and tools of learning and teaching should be upgraded and updated to assure more rigorous content and to reflect current applications of technology, the best scholarship, and research findings. Funds should be made available to develop texts for the disadvantaged, learning disabled, and gifted and talented.	--No comparable provision--	--No comparable provision--	Secondary school students should be provided with course outlines. Textbooks and curriculum materials should be sufficient and up-to-date. Public and private support for educational television programs on science should be increased, and time should be provided by commercial stations as well as cable and local television stations.	Less reliance should be placed on textbooks and more on primary source materials. Technology, especially computers, should not be purchased until the district has a utilization plan and is confident that adequate software is available. Computer resources should be related to instructional objectives, and emphasis should be placed on the social importance of computers.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
Textbook Adoption	In adopting textbooks, States and localities should evaluate texts on the basis of their capacity to present rigorous and challenging material clearly and require publishers to furnish data on effectiveness.	--No comparable provision--	--No comparable provision--	--No comparable provision--	States should ease their control over textbook selection and transfer more authority to the local level, with teachers having a far greater voice in selecting texts and materials.
Guidance	--No comparable provision--	--No comparable provision--	--No comparable provision--	Guidance services should be upgraded and promote the elimination of discrimination. Specific school personnel should be obligated to inform students of college entrance requirements	Guidance and counseling programs should be expanded, and referral services developed with community agencies.
Homework	Students in high schools should be assigned homework.	--No comparable provision--	States and local school districts should establish firm, explicit, and demanding requirements concerning homework.	Specific homework should be required regularly of all students, and the work should be suitably evaluated by a teacher.	--No comparable provision--
Effective Study and Work Skills	Effective study and work skills should be introduced in the early grades and continued throughout the student's schooling.	--No comparable provision--	--No comparable provision--	Problem-solving skills should be developed so that students may relate concepts and facts to practical situations.	--No comparable provision--
PROGRAMS FOR SPECIAL POPULATIONS	The Federal Government, in cooperation with States and localities, should help meet the needs of key groups of students such as the gifted and talented, socioeconomically disadvantaged, minority and language minority students, and the handicapped.	Federal efforts to provide special education programs for the poor and the handicapped should be continued. Federal programs for the disadvantaged and limited English speaking should be maintained.	Participation of young women and minorities should be increased in courses where they are underrepresented. Academically gifted students should be identified and challenged. Handicapped children should be specifically included in programs for education and economic growth.	Programs should be developed to identify and eliminate barriers to full educational opportunity for all youth. Schools should offer appropriate sequences of courses for students at various levels of ability.	Special arrangements and special programs should be provided for gifted students. Programs should be developed to accelerate these students. Federal funds for the education of the disadvantaged should be increased so that all eligible students may participate.
Special Fellowships for Academies	--No comparable provision--	Special Federal fellowships should be awarded to students to encourage the creation of small, individualized programs staffed by certified teachers and run as small-scale academies	--No comparable provision--	Federal funds should be used to establish 1,000 exemplary elementary and 1,000 exemplary secondary schools.	With Federal support, a network of residential math and science academies should be established over the nation.
COLLEGE ENTRANCE REQUIREMENTS	Four-year colleges and universities should raise their admission standards in line with the recommended requirements for high school graduation.	--No comparable provision--	Colleges and universities should raise their entrance requirements.	Steps should be taken to phase in college entrance requirements of four years of science and four years of mathematics.	Each State should establish a School-College Coordination Panel to define minimum academic requirements needed for the transition from school to public higher education.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
PERFORMANCE STANDARDS FOR STUDENTS	Grades should be reliable indicators of a students' readiness for further study.	--No comparable provision--	States and school systems should establish requirements concerning discipline, grades, and other matters.	--No comparable provision--	Expectations should be high, standards clear, evaluation fair, and students held accountable.
Standardized Tests	Standardized tests should be administered at major transition points from one level of schooling to another and particularly from high school to college or work. The purpose would be to certify credentials, identify the need for remedial work, and identify opportunities for enrichment.	--No comparable provision--	Effective programs should be established to monitor student progress through periodic testing of general achievement and specific skills. The testing program should be linked to a carefully designed program of remediation and enrichment for students who need special help.	Normed achievement measures should be used to assess student and teacher performance.	A new Student Achievement and Advisement Test (SAAT) should be developed. The achievement portion would be linked to the core curriculum and the advisement portion would be designed to help students make better informed choices.
Student Progess	Placement and grouping of students, as well as promotion and graduation policies, should be guided by the academic progress of students and their instructional needs, rather than by rigid adherence to age.	--No comparable provision--	Student progress should be measured by tests of general achievement and specific skills with promotion based on mastery, not age. States and local districts should establish firm, explicit, and demanding requirements concerning student grades.	Social promotions (i.e.,based on chronological age and physical size) should be curtailed.	The English proficiency of all students should be assessed before students enter high school. Remedial programs should be provided for those who are deficient.
Student Absences and Failures	Attendance policies with clear incentives and sanctions should be used to reduce the amount of time lost through student absenteeism and tardiness.	--No comparable provision--	States, school systems, principals, teachers, and parents should work to reduce student absences and school failures. Efforts to deal with absenteeism and dropouts should include revitalizing course materials and making educational schedules flexible enough to accommodate students with special problems.	A clear attendance policy with sanctions should be adopted.	--No comparable provision--
Discipline	The burden on teachers to maintain discipline should be reduced by developing and enforcing firm and fair conduct codes, and by considering alternative rooms, programs, and schools for disruptive students.	--No comparable provision--	States and local school districts should establish firm, explicit, and demanding requirements concerning student discipline.	Schools and school districts should adopt rigorous discipline policies that reflect the district's goals and expectations. Rules should be applied consistently and impartially; and State laws modified to permit effective discipline in the schools.	School officials should support teachers in the maintenance of discipline on the basis of a clearly stated code of conduct.
TEACHERS	Teacher preparation should be improved. and teaching should be made a more rewarding profession.	A major Federal initiative should be undertaken that emphasizes the critical importance of quality teachers in America's schools.	States and school districts should improve methods for recruiting, training and paying teachers.	Programs should be started to improve knowledge and skills of in-service teachers, and States should take steps to raise the quality of new teachers.	Working conditions for teachers should be improved, teaching loads reduced, interruptions and extra duties minimized, preparation improved, and planning time of 60 minutes per day provided.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
Teacher Preparation	Persons preparing to teach should be required to meet high educational standards, and to demonstrate competence in academic disciplines. Master teachers should be involved in designing teacher preparation programs. Resources should be used to solve the problem of a shortage of mathematics and science teachers.	--No comparable provision--	Every State and local school district, with the fullest participation of teachers, should drastically improve methods of training teachers. States, singly or in cooperation with one another, should establish better pre-service and in-service education programs for teachers.	States should require teachers to have computer skills. Liberal arts colleges should assume a greater role in training elementary and secondary mathematics and science teachers. The use of science museums in teacher training programs should be encouraged.	Efforts should be made to recruit outstanding students into teaching. High schools should establish cadet teacher programs. Prospective teachers should be chosen on the basis of gardes and recommendations and should complete a core of common learnings parallel to the proposed core curriculum. Their program should be for five years with the fifth year consisting of a professional education core curriculum and field experiences.
Teacher Certification	Efforts should be made to have qualified persons with academic training in mathematics and science eligible to teach. Other areas of critical need, such as English, must also be addressed.	--No comparable provision--	Teacher certification processes should be changed to make it possible for qualified "outsiders" to serve in the schools.	Elementary teachers should have a comprehensive liberal arts education, and secondary teachers a major in their teaching area, with both having a limited number of effective education courses and an internship.	Credentialing should be based on recommendations and a written examination submitted to a Board of Examiners, the majority of whom are senior teachers. Staffing should be supplemented with lecturers, retirees, and joint appointments with industry.
Master Teachers	School boards, administrators, and teachers should cooperate to develop career ladders for teachers that distinguish among the beginning instructor, the experienced teacher, and the master teacher.	A national Masters Teacher Program should be established, funded by the Federal Government, that recognizes and rewards teaching excellence.	States should create career ladders for teachers.	State and local governments should provide opportunities for high quality teachers to move up in salary and status without leaving the classroom.	After credentialing, teachers should have the opportunity to pursue a career path, moving from associate teacher to senior teacher.
Teacher Education Institutions	Colleges and universities should be judged on the performance of their graduates.	--No comparable provision--	Each State should substantially restructure and renew its teacher training curriculum, and should upgrade the academic quality of the teacher training curriculum so that entering teachers will meet higher standards.	Institutions should establish higher admission, curriculum, and graduation standards for future teachers.	Admission to teacher training programs should be based on cumulative grade point averages and recommendations from two professors who have taught the students in a required academic course.
Teacher Salaries or Grants	Teacher salaries should be increased and made professionally competitive and market sensitive. School boards should adopt an 11-month contract for teachers. Teacher salaries should be performance based.	Master teachers would be awarded a grant of $40,000 per year for a period of 5 years. An incentive approach should be adopted to provide awards to teachers of exceptional merit; awards should be numerous enough to attract national attention and substantial enough to keep the master teachers in the classroom.	Every State and local school district, with the fullest participation of teachers, should drastically improve methods for paying teachers. Financial incentives for teachers should be keyed to differing responsibilities and to filling critical needs in certain subject areas.	Schools should explore means of adjusting pay in order to compete for and retain teachers in shortage areas. Stipends should be provided for summer institutes and other activities. Working conditions, salary levels, comparability, length of school day/week/year, tenure provisions, and promotion procedures should be reviewed as aspects of teacher pay.	The average salary for teachers should be raised by at least 25 percent beyond the rate of inflation. A base salary plus cost-of-living adjustments and merit increases should be provided. Competitive grant "Teacher Excellence Funds" should be established in every school. Travel funds and summer study grants should be provided for experienced teachers.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
Teacher Performance	Salary, promotion, tenure, and retention decisions should be tied to an effective evaluation system that includes peer review so that superior teachers may be rewarded, average ones may be encouraged, and poor ones may be either improved or terminated. Master teachers should be involved in supervising teachers during their probationary years.	The master teacher proposal is designed to "pave the way for reconsideration of merit based personnel systems."	Boards of education and higher education officials should cooperate with teachers and administrators on ways to measure the effectiveness of teachers and reward outstanding performance. Procedures should be tightened for deciding which teachers to retain and dismiss.	Teachers should be objectively evaluated relative to salary, advancement, and retention of current position. Greater use should be made of special teachers qualified in the subject matter, and supervision provided as necessary.	Evaluation of teacher performance should be largely controlled by teachers judged to be outstanding in the classroom. A two-week professional development term should be added to the school year, with compensation.
Recognition of Teachers	--No comparable provision--	--No comparable provision--	States, communities, the media, and businesses should devise new ways to honor teachers.	Excellent teachers should be recognized through publicity and financial awards.	Every school district should develop programs for recognizing outstanding teachers.
Loans/Grants for Prospective Teachers	Incentives, such as grants and loans, should be made available to attract outstanding students into the teaching profession.	A scholarship program should be used to augment the supply of teachers in mathematics and science as well as in foreign languages.	Scholarships and other financial incentives should be used to attract the most able people into teaching.	--No comparable provision--	Colleges and universities should aid the top 5 percent who plan to teach. Federal funds should support a prospective teacher scholarship program.
LEADERSHIP AND MANAGEMENT	Citizens across the Nation should hold educators and elected officials responsible for providing the leadership necessary to achieve these reforms.	The executive and legislative branches of the Federal Government should emphasize the need for better schools and a better education for all young Americans.	Schools should use effective management techniques.	Administrative support should be provided for necessary equipment and materials, and class sizes should be reasonable and manageable.	--No comparable provision--
Principals	Principals and superintendents must play a crucial role in developing school and community support for reforms. Administrative burdens and related intrusions on the teacher should be reduced to add to the time available for teaching and learning.	--No comparable provision--	Principals should be in charge of educational programs. Pay should be related to responsibilities and effectiveness. States should set higher standards for recruiting, training, and monitoring the performance of principals.	Administrators should support better discipline, higher attendance, fewer classroom interruptions, higher expectations, more equipment and materials, and reasonable class sizes.	Principals should complete all requirements of a teacher and serve for two years as an administrative intern. Principals should have more control over budgets and staffing, and also be provided with a school improvement fund for staff and program development.
School Boards	School boards must consciously develop leadership skills at the school and district levels if the reforms are to be achieved.	--No comparable provision--	--No comparable provision--	School boards should work with national and State groups to develop goals and plans for implementing computer-managed instruction and technology by 1995.	Parents should become more involved in school board elections, and school boards should meet with representatives at least once a year.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
Educators, Parents, and Citizens	The Commission calls upon educators, parents, and citizens at all levels to assist in bringing about the reforms proposed in this report.	--No comparable provision--	--No comparable provision--	--No comparable provision--	Citizen participation in schools should be increased, and advisory councils and volunteer programs should be formed in all schools.
FISCAL SUPPORT	Citizens should provide the fiscal support and stability required to bring about the reforms.	The Federal Government must continue to help meet the special needs of poor and minority students while taking the lead in meeting the general and overwhelming need for educational quality.	Schools should make the best possible use of resources. More funds are needed from all sources for selective investments in efforts that promote quality.	State and local governments should bear most of the expense of elementary and secondary education, with Federal funds being used to address critical national issues.	Citizens, local school boards, State agencies and legislatures, and the Federal government must work together to help bring excellence to the Nation's public schools.
Federal Government	(See "PROGRAMS FOR SPECIAL POPULATIONS.")	Categorial programs required by the Federal Government should be funded through the Federal Treasury. The Federal Government should fund the Master Teachers Program The Federal Government has a responsibility to help overcome the unevenness of State efforts to fund education. School districts with substantial numbers of immigrant children should receive Federal impact aid. Federal funds now used for bilingual education should be used to teach non-English speaking children how to speak, read, and write English.	The Federal Government has an essential supporting role in financing education.	Federal funds should support (a) museum education activities in mathematics, science, and technology; and (b) a network of exemplary schools in mathematics, science, and technology, with 1,000 exemplary elementary and 1,000 similar secondary schools. The National Science Foundation should fund summer and in-service teacher training programs in mathematics, science, and technology, and also fund teacher training programs using information technologies. Federal support should continue funding for science television broadcasts.	Federal funds for the education of the disadvantaged should be increased to a level that will provide programs for all eligible students. Federal funds should be used to establish (a) ten Technology Resource Centers on university campuses; (b) regional networks to provide computerized library services to schools; (c) a National Film Library to secure and make available outstanding films and television programs; (d) a national network of residential science and mathematics academies; (e) a National Teacher's Service scholarship program; and (f) a expanded national survey to cover all high schools. A Federal school building and equipment loan fund should be started to update laboratories and rehabilitate schools.
States and Localities	State and local school officials, including school board members, governors, and legislators have the primary responsibility for financing and governing schools, and incorporating these reforms into educational policies and fiscal planning.	--No comparable provision--	States and localities have the chief responsibility for supporting the schools and making educational policy. States should continue efforts to secure more equitable distribution of educational resources. More human, financial, and institutional resources should be invested in education.	Each State should appoint a representative Governors' Council to develop and monitor educational goals and make recommendations for improving education. Each State should develop at least one regional resource center for mathematics and science teachers. The centers would encourage participation by business, educators, and government, and include assistance in technology instruction.	The overriding responsibility of States is to establish general standards and provide fiscal support. State education laws should be revised to eliminate confusing and inappropriate rules and regulations.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
FEDERAL ROLE	The Federal Government's role includes several functions of national consequence that States and localities are unlikely to be able to meet: protecting the constitutional and civil rights of students and personnel; collecting data, statistics, and general information about education; supporting teacher training in these areas of shortage or key national needs; and providing student financial assistance and research and graduate training. Assistance should be provided with a minimum of administrative burden and intrusiveness. The Federal Government has the primary responsibility to identify the national interest in education and also to help fund and support efforts to protect and promote that interest.	The executive and legislative branches of the Federal Government are called upon to emphasize the need for better schools and a better education for young Americans. The Federal Government should promote and support proficiency in English for all children in the public schools, but especially for those who do not speak English, or have only a limited command of English. Federal attention and assistance should go to economically depressed localities with concentrations of immigrant and/or impoverished groups as well as those that already are making strong efforts to improve their educational performance. The Federal Government should emphasize programs to develop basic scientific literacy among all citizens and programs to provide advanced training in mathematics and science for secondary school students. (Also, see "TEACHERS" above.)	(See "Federal Government" under "FISCAL SUPPORT" above.)	The President should appoint a National Education Council consisting of representatives from a cross-section of national interests. This group would identify national educational goals and assessment mechanisms for every State, school district, and school; and monitor and report annually on the status of American education and its progress toward the goals. The Federal Government has a unique role in ensuring access to equal educational opportunity in its broadest sense. The National Science Foundation should develop and evaluate technology courses and programs. The National Science Foundation should establish a council to take the leadership role in curriculum evaluation and development for mathematics, science, and technology. Widely dispersed dissemination centers should test the new curriculum.	The Secretary of Education should name a National Commission on Computer Instruction to evaluate computer software. (See "Federal Government" under "FISCAL SUPPORT" above.)
Federal Research Efforts	(See "FEDERAL ROLE" above.)	Federal support should be provided for specific research activities such as basic data, educational performance, evaluation of Federal education programs, and fundamental research into learning processes.	--No comparable provision--	Federal funds should be used to conduct research on teaching and learning at the basic and classroom levels, with particular attention to the integration of educational technology into the educational process.	The Department of Education should expand its survey of high school students to include a sampling of graduates from all high schools at four year intervals to learn about post-high school placement and experiences.

	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnegie Foundation
IMPLEMENTATION PLAN	(See "LEADERSHIP AND MANAGEMENT.")	--No comparable provision--	Each State should develop and implement a plan for improving education in grades K-12. Each governor should appoint a broadly inclusive task force on education for economic growth. This task force should develop an implementation plan for the State. Each local school district also should develop its own implementation plan.	Local school boards should foster public/private partnerships to facilitate constructive change. Businesses should be invited to to participate in cooperative programs that involve resource sharing and contributions of equipment. Programs and opportunities should be provided for students to see science and technology in actual operation in plants. Public and private employers should furnish some summer or year-round employment for mathematics, science, and technology teachers.	Each college or university should form a comprehensive partnership with one or more secondary schools. To expand learning opportunities, schools should establish connections with libraries, museums, art galleries, colleges, and industrial laboratories.
BUSINESS/ EDUCATION PARTNERSHIPS	--No comparable provision--	--No comparable provision--	Partnerships for improving education should be formed with participation by businesses, labor, and the professions. Public officials, higher education officials, and school officials should establish their own partnerships.	Schools should draw on industry, universities, and public agencies as sources of teaching assistance.	Businesses and schools should establish programs to aid high-risk students as well as the gifted. Funds should be provided for recognition of outstanding teachers, staff development, and improvement of school facilities.
SPONSOR	Secretary of Education and the Department of Education.	Twentieth Century Fund, an independent research foundation that undertakes policy studies of economic, political, and social institutions and issues.	Education Commission of the States with financial support from corporations, philanthropic foundations, and organizations.	The National Science Board Commission on Precollege Education in Mathematics, Science, and Technology. The Board is the policy-making body for the National Science Foundation.	Carnegie Foundation for the Advancement of Teaching and the Atlantic Richfield Foundation.
MEMBERSHIP	Eighteen members, with 6 from higher education and 4 from elementary and secondary education.	Twelve members, with 10 from higher education.	Forty-one members, including 14 business leaders and 13 governors.	Twenty members, 10 of whom were from higher education, and 4 of whom represented elementary and secondary education. Of the 20 members, 10 were from some portion of the scientific community.	Various groups were involved in the field studies and preparation of the report. The principal group was the National High School Panel consisting of 28 members, 9 of whom were from higher education, and 11 of whom represented elementary and secondary education.

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